

## **ABSTRACT OF THE DISCLOSURE**

A method of controlling a loop-back process between a local device and a remote  
5 device in an Ethernet passive optical network is disclosed. The method includes the steps  
of: (a) adding a predetermined field into a loop-back control OAM PDU in the loop-back  
process, the predetermined field having distinguishing messages for initiation of a loop-  
back process and messages for termination of a loop-back process; and (b) the local device  
and the remote device performing a loop-back process using the loop-back control OAM  
10 PDU.